p=[-1 0 2 3]

p =

-1 0 2 3

polyval(p,0)

ans =

3

polyval(p,[0 1 2])

ans =

3 4 -1

%graficar p

x=-2:0.01:2;

y=polyval(p,x);

whos

Name Size Bytes Class Attributes

ans 1x3 24 double

p 1x4 32 double

x 1x401 3208 double

y 1x401 3208 double

plot(x,y)

r=roots(p)

r =

1.8933 + 0.0000i

-0.9466 + 0.8297i

-0.9466 - 0.8297i

grid on

a=3+4i

a =

3.0000 + 4.0000i

real(a)

ans =

3

imag(a)

ans =

4

r

r =

1.8933 + 0.0000i

-0.9466 + 0.8297i

-0.9466 - 0.8297i

r(imag(r)==0)

ans =

1.8933

p

p =

-1 0 2 3

length(p)

ans =

4

grado=length(p)-1

grado =

3

r

r =

1.8933 + 0.0000i

-0.9466 + 0.8297i

-0.9466 - 0.8297i

p1=poly(r)

p1 =

1.0000 -0.0000 -2.0000 -3.0000

r=[r;-1];

p2=poly(r)

p2 =

1.0000 1.0000 -2.0000 -5.0000 -3.0000

roots(p2)

ans =

1.8933 + 0.0000i

-0.9466 + 0.8297i

-0.9466 - 0.8297i

-1.0000 + 0.0000i

p

p =

-1 0 2 3

d1p=polyder(p)

d1p =

-3 0 2

d2p=polyder(polyder(p))

d2p =

-6 0

p

p =

-1 0 2 3

pc=roots(d1p)

pc =

0.8165

-0.8165

maximos=pc(polyval(d2p,pc)<0)

maximos =

0.8165

%graficar p, d1p y d2p

x=-2:0.01:2;

y=polyval(p,x);

y1=polyval(d1p,x);

y2=polyval(d2p,x);

plot(x,y,x,y1,x,y2)

plot(x,y,'b')

plot(x,y,'b',x,y1,'g.',x,y2,'r=')

{Error using <a href="matlab:matlab.internal.language.introspective.errorDocCallback('plot')" style="font-weight:bold">plot</a>

Error in color/linetype argument.

}

plot(x,y,'b',x,y1,'g.',x,y2,'r+')

d2p

d2p =

-6 0

p

p =

-1 0 2 3

q=[1 1 2 3];

yq=polyval(q,x);

plot(x,y,x,yq)

i=roots(p-q)

i =

0

0

-0.5000

p

p =

-1 0 2 3

d1p

d1p =

-3 0 2

d2p

d2p =

-6 0

%intersecciones de p con d2p

p

p =

-1 0 2 3

d2p

d2p =

-6 0

i=roots(p-d2p)

{Matrix dimensions must agree.

}

i=roots(p-[0 0 d2p])

i =

3.0000

-2.6180

-0.3820

zeros(2)

ans =

0 0

0 0

zeros(2,3)

ans =

0 0 0

0 0 0

zeros(1,3)

ans =

0 0 0

p

p =

-1 0 2 3

d2p

d2p =

-6 0

d2pn=[zeros(1,2) d2p]

d2pn =

0 0 -6 0

d2pn=[zeros(1,length(p)-length(d2p)) d2p]

d2pn =

0 0 -6 0

p

p =

-1 0 2 3

polyint(p)

ans =

-0.2500 0 1.0000 3.0000 0

ip=polyint(p);

I=polyval(ip,2)-polyval(ip,1)

I =

2.2500

p=[1 -1];

q=[1 1 1];

r=conv(p,q)

r =

1 0 0 -1

deconv(r,p)

ans =

1 1 1

r

r =

1 0 0 -1

r(3)=2

r =

1 0 2 -1

deconv(r,p)

ans =

1 1 3

conv(ans,p)

ans =

1 0 2 -3

[a b]=deconv(r,p)

a =

1 1 3

b =

0 0 0 2

clc

x=[1 2 3 4];

y=[2 1 1 3];

plot(x,y)

p1=polyfit(x,y,1)

p1 =

0.3000 1.0000

x0=2:0.01:4;

y1=polyval(p1,x0);

plot(x,y,x0,y1)

x0=1:0.01:4;

y1=polyval(p1,x0);

plot(x,y,x0,y1)

axis([0 5 0 5])

p2=polyfit(x,y,2)

p2 =

0.7500 -3.4500 4.7500

y2=polyval(p2,x0);

plot(x,y,x0,y1,x0,y2)

p3=polyfit(x,y,3);

y3=polyval(p3,x0);

plot(x,y,x0,y1,x0,y2,x0,y3,'y')